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EXAMINER

AN, SHAWN S

ART UNIT PAPER NUMBER

2613

9

DATE MAILED: 02/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/752,150

Applicant(s)

ANDERSSON ET AL.

Examiner

Shawn S An

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-19, 22 and 23 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
A) On page 10, line 5, an element "6" has already been designated as TS parser 6.
B) On page 10, line 6, an element "meta data directory" does not comprise a numeric designated element.
Appropriate correction is required.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Fig. 1, elements 7-8 and 17. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 12 is objected to because of the following informalities:
On page 39, line 14, an element "(17)" is not defined in the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 5-8, 11-14, 16-19, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al (5,917,830).

Regarding claims 1 and 12, Chen et al discloses an apparatus/method for splicing data streams in MPEG transport streams, the apparatus/method comprising:

means (Fig. 4, 405) for receiving a first input transport stream of first data packets;

means (410) for receiving a second input transport stream of second data packets to replace selected first data packets (splicing) in the first stream;

means for extracting for each data packet a time reference (Fig. 4, PCR) and data packet status information indicating the syntactic function (R_v) of the data packet;

means (415, 420, 425) for establishing for each data packet a control data object storing the time references and the data packet status information;

means (405) for establishing for ordered sets of the first data packets corresponding ordered sets of control data objects (frames);

means (415) for establishing for ordered sets of the first data packets corresponding ordered sets of control data objects storing information pertaining to different logical structures of higher level than the data packets such as frames, sequence of frames, and packetized elementary stream packets (PCR, DTS, R_v);

means (425) for queuing the control data objects in different queues dependent on the data packet status or on the status of a group of data packets;

means (475) for selecting from the queues control objects associated to data packets to be output in an output stream of data packets;

means for (470) assembling selected control objects to a program associated data packets of different data;

means for (Fig. 3, 300) assembling data packets associated to the selected and assembled control data objects to an output stream (OS) of data packets;

means (475) for outputting the assembled stream (OS) of data packets.

Regarding claims 2 and 13, Chen et al discloses padding packets (430) to fill out unutilized space in terms of free bandwidth of the output transport stream.

Regarding claims 3 and 14, Chen et al discloses means for using control objects (PCR, DTS, R_v) to generate control information for operating on associated data packets.

Regarding claims 5 and 16, Chen et al discloses means for operating on different layers of the transport streams generating different levels of abstraction of control data objects (col. 8, lines 21-29).

Regarding claims 6-7 and 17-18, Chen et al discloses means for genlocking to an encoder clock of a received first/second input TS, wherein some packets include a PCR (Fig. 4); and

means (425) for determining an arrival time in the shape of local clock reference of every transport stream packet in the incoming first input TS, wherein the local clock reference carries information about which positions within a transport stream stream at which all its TS packets arrived.

Regarding claims 8 and 19, Chen et al discloses means (425) for translating time base of the second TS to the time base of the first TS.

Regarding claims 11 and 22, Chen et al discloses means for controlling buffer violations in the decoder by using free bandwidth in empty packets in first TS (430) to reschedule transport packets thereby preventing overflow or underflow in the decoder buffers (485).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al (5,917,830) in view of Wine et al (6,137,834).

Regarding claim 23, Chen et al discloses PCR, video, audio, and a header with control data (Figs. 4, 6). Chen et al does not specifically mention having a computer program product for performing splicing functions.

However, Wine et al teaches splicing apparatus incorporating a computer system that is programmed to perform the splicing functions (col. 2, lines 48-58).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an apparatus/method for splicing data streams as taught by Chen et al to incorporate the well known concept of a computer system that is programmed to perform the splicing compressed bitstreams as taught by Wine et al, thereby significantly saving operating costs associated with the hardware.

8. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al (5,917,830) in view of Larson et al (4,646,287).

Regarding claims 4 and 15, Chen et al does not specifically disclose means for marking data packets as available or non-available for replacement, and means for leaving non-available packets intact and reassembled into the output stream of data packets.

However, Larson et al teaches disclose means (804, 806) for marking data packets as available (normal packet) or non available (idle packets) for replacement, and means (1420) for leaving non-available packets intact and reassembled into the output stream of data packets (abs.).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an apparatus/method for splicing data streams as taught by Chen et al to incorporate the well known concept of marking data packets as taught by Larson et al for an efficient way to handle packet transmission.

Allowable Subject Matter

9. Claims 9-10 and 20-21 are objected to as being dependent upon a rejected base claims 1 and 12, respectively, but would be allowable: if claim 9 or claim 10 is rewritten in independent form including all of the limitations of the base claim 1 and any intervening claims; and if claim 20 or claim 21 is rewritten in independent form including all of the limitations of the base claim 12 and any intervening claims.

Dependent claims 9-10 and 20-21, each recites the novel feature.

The art of record fails to anticipate or make obvious the novel features as specified in the dependent claims 9-10 and 20-21. Accordingly, if the amendments are made to the claims listed above, and if rejected claims are canceled, the application would be placed in condition for allowance.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

A) Hurst, Jr. (6,038,000), Information stream syntax for indicating the presence of a splice point.

B) Yoshinari et al (6,414,998 B1), Method and apparatus for inserting an image material.

C) Vines (6,252,873 B1), Method of ensuring a smooth transition between MPEG-2 transport streams.

D) Lyons et al (6,101,1950, Timing correction method and apparatus.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn S An whose telephone number is 703-305-0099. The examiner can normally be reached on Flex hours (10).

12. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2613

13 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SSA

SHAWN C. LEE
PATENT EXAMINER

Primary Patent Examiner

2/13/04